

REMARKS

Claims 1-6, 8-10 and 12-14 are pending and stand rejected.

Claim Objections

Claim 12 has been amended to address the Examiner's objection. Please reconsider and withdraw the claim objection.

Obviousness Rejection of Claims 1-13

Claims 1-6 and 12-13 stand rejected as allegedly obvious over Patent No. 6,144,120 ("Doi") in view of Patent No. 5,254,892 ("Bosman").

As amended, Claim 1 recites "the motor housing includes an injection molded part within which the stator, together with the stator core and the phase windings, are fully embedded." Support for the amendment is found, for example, at page 6, paragraph 5 of the specification. In contrast, Fig. 1 of Doi shows a motor housing 1, stator 3c and rotor 4. An opening separates portions of stator 3C from housing 1. Thus, Doi does not teach fully embedding the stator, together with the stator core and the phase windings in a housing.

At Figs. 2 and 3 Bosman shows housing 26, stator 28 and rotor 30. At col. 6, lines 30-35, Bosman states that housing 26 is "assembled over the stator 28". The electrical connector 36 forms a cap over an open end of housing 26. Hence, Bosman does not teach fully embedding the stator, together with the stator core and the phase windings in the housing as claimed in Claim 1. Claims 2-6 and 12-13 are patentable at least by the virtue of their dependence on Claim 1.

Claim 10 is rejected over Doi, Bosman and Patent No. 4,672,247 ("Madsen"). Madsen fails to cure the above-identified deficiencies of Doi and Bosman. As such, Claim 10 is patentable at least by the virtue of its dependence from Claim 1.

Obviousness Rejection of Claims 8-9 and 14

Claims 8-9 and 14 are rejected over Patent No. 4,742,989 ("Akagi") in view of Bosman. The combination of the references fails to disclose or suggest the invention of Claim 8.

Fig. 1 of Akagi shows rotor 18 and magnets 21 connected by internal screw 15 to shaft 16. In contrast, Figs. 6a-6d of Bosman show cylindrical metal barrier 58 with a hub 62 injection

molded on the interior surface thereof. Hub 62 has an internal thread 64. Permanent magnets 68 are injection molded around the outer surface of metal barrier 56. Modifying Akagi in view of Bosman would require interposing a metal barrier layer between the rotor pole plates 18 and magnets 21. It also requires rearranging the magnets 21 and the pole plates such that the magnets are on the outside periphery of the rotor 18 as opposed to being arranged in between the pole plates as shown in Fig. 1.

Akagi in view of Bosman would result in a rotor attached to the exterior of a metal barrier member, Claim 8 recites: “wherein the rotor hub includes an injection molded part within which the rotor is fixed.” That is, the invention of Claim 8 requires a rotor within an injection molded rotor hub not on the exterior thereof.

Therefore the rejection of Claim 8 should be reconsidered and withdrawn. Claims 9 and 14 are deemed patentable at least by the virtue of their dependence from Claim 8.

CONCLUSION

There are numerous additional reasons in support of patentability, but such reasons are moot in light of the above remarks and are omitted in the interest of brevity. Applicant respectfully request a notice of allowance.

Although an extension of time is not deemed appropriate, the Office is hereby requested to grant an extension to maintain the application pending and charge the extension fees against Deposit Account No. 04-1679 to Duane Morris LLP.

The Examiner is invited to contact the undersigned to discuss any issue relating to this application.

Respectfully submitted,



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